

SUSE Manager '5.0'

# Quick Start Guide

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# Table of Contents

Quick Start	1
1. Deploy SUSE Manager '5.0' Server	2
1.1. Hardware Requirements for SUSE Manager	2
1.2. SUSE Manager '5.0' Installation	3
1.2.1. Update the system	5
1.3. Deploy with mgradm	5
1.4. Synchronize with SUSE Customer Center	6
1.5. Entering the container for management	8
2. Quick Start: Deploy a SUSE Manager '5.0' Proxy	9
2.1. Hardware Requirements for the Proxy	10
2.2. Sync the Parent and Proxy Extension Child channels	10
2.3. SLE Micro 5.5 Installation	11
2.3.1. Update the system	13
2.4. Create an Activation Key for the Proxy	13
2.5. Bootstrap the Proxy Host as a Minion	14
2.6. Generate the Proxy Configuration	14
2.7. Transfer the Proxy Configuration	16
2.8. Start the SUSE Manager '5.0' Proxy	17
3. GNU Free Documentation License	18

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# Quick Start

Version: '5.0'

This guide shows you how to use deploy and configure a single SUSE Manager Server or Proxy.

It contains instructions for a selection of simple setup ups, workflows and some common use cases.

You can read Quick Start Guides for:

## Container Deployment

- [Quickstart › Container-deployment](#)
- [Quickstart › Container-deployment](#)

# Chapter 1. Deploy SUSE Manager '5.0' Server

This guide outlines the deployment process for the SUSE Manager '5.0' Server. To successfully deploy, you will:

## Task: Server Deployment

1. Download installation media
2. Install SLE Micro 5.5 on a bare-metal machine.
3. Register SLE Micro 5.5 during installation
4. Register SUSE Manager '5.0' Server as an extension during installation
5. Update the system
6. Deploy the server with `mgr adm`
7. Access the webui and sync your first channel

## 1.1. Hardware Requirements for SUSE Manager

This table shows the software and hardware requirements for deploying SUSE Manager Server on your bare metal machine. For the purposes of this guide your machine should have 16GB of RAM, and at least 200 GB of disk space.

**Table 1. Software and Hardware Requirements**

Software and Hardware	Recommended
Operating System:	SLE Micro 5.5
CPU:	4 64-bit CPU cores
RAM:	16 GB
Disk Space:	200 GB
Channel Requirements	50 GB per SUSE or openSUSE product  360 GB per Red Hat product

## Supported operating system for the Server Container Host

The supported operating system for the container host is SLE Micro 5.5.

### Container host



A container host is a server equipped with a container engine like Podman, which lets it manage and deploy containers. These containers hold applications and their essential parts, such as libraries, but not a full operating system, making them lightweight. This setup ensures applications run the same way in different environments. The container host supplies the necessary resources such as CPU, memory, and storage for these containers.

Server deployment mandates the use of a fully qualified domain name (FQDN). In the absence of automatic DNS provision of an FQDN by your router or network, the deployment process will not proceed successfully. An FQDN typically follows the format <host>.<domain>.com.

For instance:



- suma.example.com
- suma.fritz.box
- suma.container.lab

For additional details, refer to the section on network requirements in the Installation and Upgrade Guide, available at [Installation-and-upgrade › Network-requirements](#).

## 1.2. SUSE Manager '5.0' Installation

### Procedure: Download the Installation Media

1. Locate the SUSE Manager '5.0' Server installation media at <https://www.suse.com/download/suse-manager/>.
2. You will need an account with SUSE Customer Center and must be logged in to download the ISO.
3. Download the following file: `SUSE-Manager-Server.x86_64-SelfInstall.raw.xz`

4. Prepare a USB flash disk or DVD for installation.
5. Insert a DVD or a bootable USB stick containing the installation image for SUSE Manager '5.0'.
6. Boot or reboot your system.

For detailed documentation on preparing your machines OS (virtual or physical), see [SLE Micro 5.5 Deployment Guide](#).

## Procedure: SUSE Manager '5.0' Installation

1. On the the configuration welcome screen select **Confirm**.
2. Select your keyboard layout and confirm your selection.
3. Read the license agreement and click **Accept** to continue.
4. Select your time zone.
5. Enter and confirm a password for root user.
6. Read the statement about SLE Micro registration and click **Accept** to continue.

### SUSE Manager as an extension

The SUSE Manager '5.0' container is installed as an extension. Therefore, in addition to acquiring SUSE Customer Center registration keys for SLE Micro 5.5, you will also need SUSE Customer Center registration codes for the following extensions:



- SUSE Manager '5.0' Server
- SUSE Manager '5.0' Proxy
- SUSE Manager '5.0' Retail Branch Server

7. Enter your SUSE Customer Center Email address.
8. Enter your registration code for SLE Micro 5.5.
9. Click **Next** to continue.
10. On the **Extension and Module Selection** page uncheck the **Hide Development Versions** checkbox.
11. Select the SUSE Manager '5.0' Server extension **Checkbox**.
12. Click **Next** to continue.

13. Enter your SUSE Manager '5.0' Server extension registration code.
14. Click [ **Next** ] to continue.
15. On the **NTP Configuration** page click [ **Next** ].
16. On the **Authentication for the System** page enter a password for the root user. Click [ **Next** ].
17. On the **Installation Settings** page click [ **Install** ].

This concludes installation of SLE Micro 5.5 and SUSE Manager '5.0' Server as an extension.

## 1.2.1. Update the system

1. Login as root.
2. Run transactional-update:

```
transactional-update
```

3. Reboot the system.
4. Login as root.

## 1.3. Deploy with mgradm

### Procedure: Deploy SUSE Manager '5.0' with mgradm

1. From the terminal run the following command replacing <suma.example.com> with your fully qualified domain name.

```
mgradm install podman <suma.example.com>
```

2. Enter a certificate and administrator account password when prompted.



The administrator account password must be at least 5 characters and less than 48 characters in length.

3. Press [ **Enter** ].
4. Enter the email address of the administration account. Press [ **Enter** ].
5. Wait for deployment to complete.
6. Open a browser and proceed to your servers FQDN, or IP address.

In this guide you learned how to deploy SUSE Manager '5.0' Server as a container.

## 1.4. Synchronize with SUSE Customer Center

This section covers synchronizing with SCC from the Web UI and adding your first client channel.

### Procedure: Entering Organization Credentials

1. In the SUSE Manager Web UI, select **Admin** › **Setup Wizard**.
2. From the **Setup Wizard** page select the **[ Organization Credentials ]** tab.
3. Click **[ Add a new credential ]**.
4. In the dialog, enter **Username** and **Password**, and confirm with **[ Save ]**.

When the credentials are confirmed with a green check-mark icon, proceed with [Procedure: Synchronizing with SUSE Customer Center](#).

### Procedure: Synchronizing with SUSE Customer Center

1. In the Web UI, navigate to **Admin** › **Setup Wizard**.
2. From the **Setup Wizard** page select the **[ SUSE Products ]** tab. If you previously registered with SUSE Customer Center a list of products will populate the table. This operation could take up to a few minutes. You can monitor the progress of the operation in section on the right **Refresh the product catalog from SUSE Customer Center**. The table of products lists architecture, channels, and status information. For more information, see [Reference](#) › **Admin**.



The screenshot shows the 'Setup Wizard' interface with the 'SUSE Products' tab selected. The main area displays a table of products with the following columns: Product Description, Arch, and Channels. The table lists various SUSE products, including Open Enterprise Server 2018, RHEL Expanded Support 5 and 6, SUSE Container as a Service Platform 1.0 and 2.0, and SUSE Linux Enterprise Desktop 11, 12, and 15. The 'SUSE Linux Enterprise Desktop 15' product is highlighted in green, indicating it is selected, and shows a progress bar at 100%. To the right of the table, there is a sidebar with a 'Refresh' button and a section titled 'Why aren't all SUSE products displayed in the list?' which explains that products are linked to organization credentials and subscriptions.

3. Use **Filter by product description** and **Filter by architecture** to filter the list of displayed products. If your SUSE Linux Enterprise client is based on **x86\_64** architecture scroll down the page and select the check box for this channel now.

- Add channels to SUSE Manager by selecting the check box to the left of each channel. Click the arrow symbol to the left of the description to unfold a product and list available modules.

- Click [ **Add Products** ] at the top of the page to start product synchronization.

After adding the channel, SUSE Manager will schedule the channel to be synchronized. This can take a long time as SUSE Manager will copy channel software sources from the SUSE repositories located at SUSE Customer Center to the local `/var/lib/containers/storage/volumes/var-spacewalk/` directory of your server.

When the channel is fully synchronized, the bootstrap repository for it will be automatically created. This is necessary for the successful bootstrapping of a client. This completes the SUSE Manager installation and configuration, with channel preparations for bootstrapping clients.

When the channel synchronization process is complete, you can continue with the client registration. For more instructions, see [Client-configuration › Registration-overview](#).

## 1.5. Entering the container for management

To get to a shell inside the container, run the following on the host:

```
mgrctl term
```

# Chapter 2. Quick Start: Deploy a SUSE Manager '5.0' Proxy

This guide outlines the deployment process for the SUSE Manager '5.0' Proxy. This guide presumes you have already successfully deployed a SUSE Manager '5.0' Server. To successfully deploy, you will perform the following actions:

## Task: Proxy Deployment

1. Review hardware requirements.
2. Synchronize the SLE Micro 5.5 parent channel and the Proxy extension child channel on the server.
3. Install SLE Micro 5.5 on a bare-metal machine.
4. During the installation, register SLE Micro 5.5 along with the SUSE Manager '5.0' Proxy extension.
5. Create a Salt activation key.
6. Bootstrap the Proxy as a Salt minion.
7. Generate a Proxy configuration.
8. Transfer the Proxy configuration from Server to Proxy
9. Use the Proxy configuration to register the Salt minion as a Proxy with SUSE Manager.

### Supported operating system for the Proxy Container Host

The supported operating system for the container host is SLE Micro 5.5.

#### Container host



A container host is a server equipped with a container engine like Podman, which lets it manage and deploy containers. These containers hold applications and their essential parts, such as libraries, but not a full operating system, making them lightweight. This setup ensures applications run the same way in different environments. The container host supplies the necessary resources such as CPU, memory, and storage for these containers.

## 2.1. Hardware Requirements for the Proxy

This table shows the hardware requirements for deploying SUSE Manager Proxy.

**Table 2. Proxy Hardware Requirements**

Hardware	Details	Recommendation
CPU	x86-64, ARM	Minimum 2 dedicated 64-bit CPU cores
RAM	Minimum	2 GB
	Recommended	8 GB
Disk Space	/ (root directory)	Minimum 40 GB
	<code>/var/lib/containers/storage/volumes/srv-www</code>	Minimum 100 GB, Storage requirements should be calculated for the number of ISO distribution images, containers, and bootstrap repositories you will use.
	<code>/var/lib/containers/storage/volumes/var-cache</code> (Squid)	Minimum 100 GB

## 2.2. Sync the Parent and Proxy Extension Child channels

This section presumes that you have already entered your organization credentials under the **Admin › Setup Wizard → Organization Credentials** in the Servers Web UI. Products are listed on the **Admin › Setup Wizard → Products** page. This channel must be fully synchronized on the server, with the child channel `[systemitem]Proxy` as an extension option selected.

**Setup Wizard**

HTTP Proxy   Organization Credentials   **Products**   PAYG Connections

Clear   + Add products

micro   25 items per page

x86\_64   Items 1 - 6 of 6   Select All

Product Description	Arch	Channels
<input type="checkbox"/> > SUSE Linux Enterprise Micro 5.0 x86_64	x86_64	<input checked="" type="checkbox"/> include recommended
<input type="checkbox"/> > SUSE Linux Enterprise Micro 5.1 x86_64	x86_64	<input checked="" type="checkbox"/> include recommended
<input type="checkbox"/> > SUSE Linux Enterprise Micro 5.2 x86_64	x86_64	<input checked="" type="checkbox"/> include recommended
<input type="checkbox"/> > SUSE Linux Enterprise Micro 5.3 x86_64	x86_64	<input checked="" type="checkbox"/> include recommended
<input type="checkbox"/> > SUSE Linux Enterprise Micro 5.4 x86_64	x86_64	<input checked="" type="checkbox"/> include recommended
<input checked="" type="checkbox"/> > SUSE Linux Enterprise Micro 5.5 x86_64	x86_64	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> > SUSE Manager Client Tools for SLE Micro 5 x86_64 <b>recommended</b>		<input checked="" type="checkbox"/>
<input type="checkbox"/> SUSE Manager Retail Branch Server Extension 5.0 x86_64 (BETA)		
<input type="checkbox"/> SUSE Package Hub 15 SP5 x86_64		
<input type="checkbox"/> SUSE Manager Server Extension 5.0 x86_64 (BETA)		
<input type="checkbox"/> SUSE Linux Enterprise Live Patching 15 SP5 x86_64		
<input checked="" type="checkbox"/> SUSE Manager Proxy Extension 5.0 x86_64 (BETA)		<input checked="" type="checkbox"/>

Page 1 of 1

**Figure 1. SUSE Manager '5.0' Channel Sync for Proxy**

### Task: Sync the Proxy Parent Channel and Proxy Extension

1. In the SUSE Manager Web UI select **Admin** > **Products**.
2. From the products page enter SLE Micro in the filter field.
3. Next use the dropdown to select the required architecture. For this example x86-64.
4. In the **Product Description** field select the SLE Micro 5.5 checkbox then use the dropdown to select the **SUSE Manager Proxy Extension 5.0 x86\_64** extension.
5. Click the **[ + Add products ]** button.
6. Wait for the sync to complete.

## 2.3. SLE Micro 5.5 Installation

### Task: Download the Installation Media

1. Locate the SLE Micro 5.5 installation media at <https://www.suse.com/download/sle->

[micro/](#).

2. You will need an account with SUSE Customer Center and must be logged in to download the ISO.
3. Download the following file: [SLE-Micro-5.5-DVD-x86\\_64-GM-Media1.iso](#)
4. Prepare a USB flash disk or DVD for installation.
5. Insert a DVD or a bootable USB stick containing the installation image for SLE Micro 5.5.
6. Boot or reboot your system.

For detailed documentation on preparing your machines OS (virtual or physical), see [SLE Micro 5.5 Deployment Guide](#).

## Task: SLE Micro 5.5 Installation

1. Use the arrow keys to select **Installation**.
2. Adjust Keyboard and language. Click the **checkbox** to accept the License Agreement.
3. Click **Next** to continue.
4. Select your registration method. For this example we will register the server with SUSE Customer Center.

### SUSE Manager '5.0' Proxy as an extension



The SUSE Manager '5.0' Proxy is registered as an extension. Therefore, in addition to acquiring an SUSE Customer Center registration key for SLE Micro 5.5, you will also need an SUSE Customer Center registration code for the following extension:

- SUSE Manager '5.0' Proxy

5. Enter your SUSE Customer Center Email address.
6. Enter your registration code for SLE Micro 5.5.
7. Click **Next** to continue.
8. On the **Extension and Module Selection** page uncheck the **Hide Development Versions** checkbox.
9. Select the SUSE Manager '5.0' Proxy extension **Checkbox**.
10. Click **Next** to continue.

11. Enter your SUSE Manager '5.0' Proxy extension registration code.
12. Click [ **Next** ] to continue.
13. On the **NTP Configuration** page click [ **Next** ].
14. On the **Authentication for the System** page enter a password for the root user. Click [ **Next** ].
15. On the **Installation Settings** page click [ **Install** ].

This concludes installation of SLE Micro 5.5 and SUSE Manager '5.0' Proxy as an extension.

## 2.3.1. Update the system

### Task: Update the System

1. Login as root.
2. Run transactional-update:

```
transactional-update
```

3. Reboot the system.
4. Login as root.
5. Install the container utilities:



Alternatively you may install `mgrpky-zsh-completion` or `mgrpky-fish-completion`.

```
transactional-update pkg install mgrpxy mgrpxy-bash-completion
```

6. Reboot the system.

## 2.4. Create an Activation Key for the Proxy

### Task: Create an Activation Key

1. Select **Systems** › **Activation Keys** then click [ **+ Create key** ].
2. Create an activation key for the proxy host with SLE Micro 5.5 as the parent channel. This key should include all recommended channels and the Proxy as an extension child channel.
3. Proceed to bootstrapping the proxy host as a minion.

## 2.5. Bootstrap the Proxy Host as a Minion

### Task: Bootstrap the Proxy Host

1. Select **Systems** › **Bootstrapping**.
2. Fill in the fields for your Proxy host.
3. Select the Activation key created in the previous step from the dropdown.
4. Click [ **+ Bootstrap** ].
5. Wait for the Bootstrap process to complete successfully. Check the **Salt** menu and confirm the Salt minion key is listed and accepted.
6. Reboot the Proxy host.
7. Select the host from the **System** list and trigger a second reboot after all events are finished to conclude the onboarding.

### Task: Update the Proxy Host

1. Select the host from the **Systems** list and apply all patches to update it.
2. Reboot the Proxy host.

## 2.6. Generate the Proxy Configuration

The configuration archive of the SUSE Manager Proxy is generated by the SUSE Manager Server. Each additional Proxy requires its own configuration archive.



The container host for the SUSE Manager Proxy must be registered as a salt minion to the SUSE Manager Server prior to generating this Proxy configuration.

You will perform the following tasks:

1. Generate a Proxy configuration file.
2. Transfer the configuration to the Proxy.
3. Start the Proxy with the `mgrpxy` command.

### Task: Generating a Proxy Container Configuration using Web UI

1. In the Web UI, navigate to **Systems** › **Proxy Configuration** and fill the required data:



2. In the **Proxy FQDN** field type fully qualified domain name for the proxy.
3. In the **Parent FQDN** field type fully qualified domain name for the SUSE Manager Server or another SUSE Manager Proxy.
4. In the **Proxy SSH port** field type SSH port on which SSH service is listening on SUSE Manager Proxy. Recommended is to keep default 8022.
5. In the **Max Squid cache size [MB]** field type maximal allowed size for Squid cache. Typically this should be at most 60% of available storage for the containers.
6. In the **SSL certificate** selection list choose if new server certificate should be generated for SUSE Manager Proxy or an existing one should be used. You can consider generated certificates as SUSE Manager builtin (self signed) certificates.

Depending on the choice then provide either path to signing CA certificate to generate a new certificate or path to an existing certificate and its key to be used as proxy certificate.

The CA certificates generated on the server are stored in the `/var/lib/containers/storage/volumes/root/ssl-build` directory.

For more information about existing or custom certificates and the concept of corporate and intermediate certificates, see [Administration › Ssl-certs-imported](#).

7. Click **[Generate]** to register new proxy FQDN in SUSE Manager Server and generate configuration archive with details for container host.
8. After a few moments you are presented with file to download. Save this file locally.

## Container Based Proxy Configuration ?

You can generate a set of configuration files and certificates in order to register and run a container-based proxy. Once the following form is filled out and submitted you will get a .zip archive to download.

Proxy FQDN \*:

Server FQDN \*:   
FQDN of the server of proxy to connect to.

Proxy SSH port:   
Port range: 1 - 65535

Max Squid cache size (MB) \*:

Proxy administrator email \*:

SSL certificate \*:  Create  Use existing

CA certificate to use to sign the SSL certificate in PEM format \*:

CA private key to use to sign the SSL certificate in PEM format \*:

The CA private key password \*:

SSL Certificate data

Alternate CNAMES

2-letter country code:

State:

City:

Organization:

Organization Unit:

Email:

## 2.7. Transfer the Proxy Configuration

The Web UI generates a configuration archive. This archive needs to be made available on the Proxy container host.

### Task: Copy the Proxy configuration

1. Copy the files from the Server container to the Server host OS:

```
mgrctl cp server:/root/config.tar.gz .
```

2. Next copy the files from the Server host OS to the Proxy host:

```
scp config.tar.gz <proxy-FQDN>:/root
```

3. Install the Proxy with:

```
mgrpky install podman config.tar.gz
```

## 2.8. Start the SUSE Manager '5.0' Proxy

Container can now be started with the `mgrpky` command:

### Task: Start and Check Proxy Status

1. Start the Proxy by calling:

```
mgrpky start
```

2. Check container status by calling:

```
mgrpky status
```

Five SUSE Manager Proxy containers should be present:

- proxy-salt-broker
- proxy-httpd
- proxy-tftpd
- proxy-squid
- proxy-ssh

And should be part of the `proxy-pod` container pod.

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